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60,426-096; 1999P07769US01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Quail et al. Art Unit: 3661
Serial No.: 09/654,417 ✓ Examiner: To, T.
Filed: September 1, 2000
For: CONTROLLER FOR OCCUPANT RESTRAINT SYSTEM
Docket No.: 1999P07769US01; 60,426-096

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR RECONSIDERATION

Dear Sir:

In response to the Office Action of June 4, 2003, Applicant requests consideration of the following remarks. Applicant respectfully reiterates all of the arguments made in previous Office Action responses to address the examiner's rejections. Arguments, not previously addressed by the examiner and additional arguments, prepared in response to new issues raised in the subject final rejection, are set forth below.

Claims 1-18 and 20-41 remain in the application including independent claims 1, 15, and 18. Claim 19 has been cancelled.

Claims 1-12, 15-18, 20-26, and 28-40 stand rejected as being unpatentable over Steffens, Jr. et al. in view of Stanley. Claims 20-26, 32, and 35 were not previously rejected under any prior art in the previous office action, and thus are newly rejected based on Steffens, Jr. et al. in view of Stanley.

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Claim 1 includes the feature of at least one modifier sensor that generates a modifier signal representative of either a positive condition to enable an occupant restraint system or a negative condition to disable the occupant restraint system where the modifier signal disables at least one of an airbag control or a seat belt control as soon as at least one negative condition is identified.

In response to Applicant's argument that Steffens does not teach this feature, the examiner argues, "[o]ne artisan skilled the art is able to realize that a plurality of sensors taught in Steffens are considered as the detecting device for detecting various conditions of the occupant and then the controller activates the safety device based on the input signals of those sensors." The examiner's argument fails to explain how the sensors in Steffens operate to teach the feature of claim 1 set forth above.

Applicant's modifier signal disables the safety device as soon as one negative condition is identified. Steffens clearly teaches away from this. "The present invention provides a method and apparatus for controlling an occupant restraining device in accordance with a selected control zone which is dependent upon at least two measured parameters." Col. 1, lines 54-57. Thus, Steffens does not teach the features set forth in claim 1. For similar reasons Steffens does not disclose, suggest, or teach the features of claim 18.

Claim 15 is also allowable over the combination of Steffens and Stanley for the reasons discussed above. Further, claim 15 includes the combination of a plurality of collision sensors including a severity sensor for generating a severity signal indicating collision characteristics occurring at the time of or just after collision, and a pre-collision sensor for generating a pre-collision signal indicating vehicle characteristics occurring just before collision. The crash

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sensor 90 of Steffens only determines vehicle characteristics at the time of the collision, col. 3, line 64 to col. 4, line 11. The Examiner cites col. 3, lines 1-67 as teaching the generation of a pre-collision signal indicating vehicle characteristics before collision, however, the material referred to at col. 3, lines 1-67 only indicates *occupant* characteristics prior to collision, not *vehicle* characteristics. Thus, Steffens does not teach the features of claim 15 discussed above. *The examiner has not responded to this argument.*

Claim 15 also includes the feature of a plurality of modifier sensors including an occupant presence sensor for generating an occupant presence signal indicating whether an occupant is present in a predetermined area and a child seat sensor for generating a child seat position signal indicating whether a child seat is properly installed within the predetermined area. Steffens does not teach the use of a child seat sensor. The examiner relies on Stanley to teach this feature, arguing that it would be obvious to modify Steffens to include the child seat sensor of Stanley.

Stanley uses a transmitter/receiver subsystem 20 to determine whether or not an occupant is present on the seat and uses a range/proximity sensing subsystem 30 to determine the position of the occupant on the seat. Stanley relies on this combination of occupant sensors to detect the presence of a child seat. Thus, Stanley does not teach the use of a separate or dedicated child seat sensor, operating independently from the occupant sensors, which identifies a child seat as claimed by Applicant.

Further, as Stanley does not teach the use of a separate child seat sensors, but instead relies on existing occupant sensors, the existing Steffens' occupant position sensors would have to be utilized to detect a child seat. However, the layout of the Steffens occupant position sensors 80, 84, 86 would not be able to differentiate an adult from a child seat. To rearrange the

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Steffens occupant position sensors in the configuration taught by Stanley would defeat the benefits taught and achieved by the specific occupant position sensor configuration in Steffens. It is improper to modify a base reference in a manner that defeats or destroys the benefits of that reference. Also, as discussed above, even if the Steffens' occupant sensors were re-positioned as taught by Stanley, they still would not be able to accurately identify the presence of a child seat.

Finally, the examiner has pointed to no teaching in Stanley of any particular benefit to be derived from the sensor arrangement of Stanley. In addition, there is nothing in Steffens that would have led one of ordinary skill in the art to believe that Steffens' sensor arrangement for detecting an occupant was in any way deficient for Steffens' purposes or was in need in modification, especially as neither Steffens' nor Stanley teach using a separate child seat sensor in addition to the standard occupant sensors. One of ordinary skill in the art would have found no reason, suggestion, or incentive for attempting to combine these references so as to arrive at the subject matter of claim 15 other than through the luxury of hindsight accorded one whom first viewed Applicant's disclosure. This is not the proper basis for a rejection. *The examiner has not responded to this argument.*

Many of the features of the dependent claims are also not taught by Steffens and Stanley. For example, claim 24 includes the feature of programming the processing unit with a fuzzy logic analysis process to generate the plurality of output signals. Steffens does not teach this feature and the examiner has not indicated where in Steffens or Stanley the limitation of claim 24 is found.

Claim 26 includes the feature of generating a severity signal indicating vehicle characteristics at or after collision and generating a pre-collision signal indicating vehicle

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characteristics before collision. This feature is not disclosed anywhere in the references and the examiner has not indicated where in Steffens or Stanley the limitation of claim 26 is found.

Claim 35 includes the feature of generating the pre-collision signal based on at least vehicle speed and braking characteristics prior to a collision event. *The examiner has offered no explanation as to where this feature is taught or disclosed in the references.*

Claim 28 includes the feature of including the step of learning vehicle characteristics unique to vehicle type and size by using a neural network. This feature is not disclosed, suggested, or taught in any of the cited references. Further, the examiner has not indicated where in the references such a feature is taught. *The examiner has not responded to Applicant's request for a more detailed explanation.*

With regard to claims 36-40, the examiner admits that neither Steffens nor Stanley mentions the use of a network capable of learning various vehicle characteristics unique to vehicle type and size and adjusting the output signals accordingly. The examiner simply argues that this feature is "inherent." Applicant strongly objects to this characterization and respectfully requests that the examiner indicate where in the prior art this feature is taught. The benefit of this feature is that a common system can be used for all vehicles instead of re-designing and re-programming each system separately for each vehicle type. The only teaching of this feature is found in Applicant's own disclosure, which cannot be used as motivation or suggestion to modify Steffens to include this feature because this is an improper use of hindsight. *The examiner has not responded to Applicant's argument and has not provided any prior art teaching to show this feature.*

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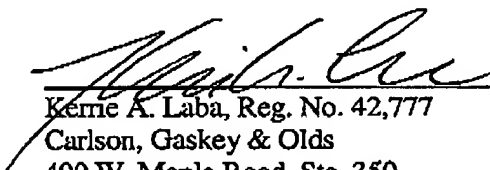
Claims 13, 14, 27, and 41 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Steffens in view of Stanley and further in view of Gille. For the reasons, discussed above, the combination of the Steffens and Stanley references do not teach the system as claimed by Applicant. The deficiencies in Steffens and Stanley are also not shown in Gille. Further, with regard to the feature of a fuzzy logic control system for optimizing the plurality of output signals based on the plurality of input signals as set forth in claims 14, 27, and 41, the examiner argues that Steffens teaches this feature, citing the abstract and Figure 2. Neither the abstract nor Figure 2 of Steffens mentions the use of a fuzzy logic control system, let alone teaching how a fuzzy logic control system is used in the occupant restraint system. Further, Steffens teaches none of the detailed steps of claim 27. The only teaching of this feature is found in Applicant's own disclosure and cannot be used as motivation or suggestion to modify Steffens to include this feature because this is an improper use of hindsight. *The examiner has not responded to this argument.*

For the reasons set forth above, Applicant respectfully requests a more detailed explanation for the rejections of claims 14, 15, 24, 26-28, and 35-41 as the examiner's rejections in their current form are insufficient to explain how the references disclose, suggest, or teach all of the claimed features.

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Applicant believes no additional fees are due, however, the Commissioner is authorized to charge Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds for any additional claim fees.

Respectfully submitted,


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Dated: August 6, 2003

CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States patent and Trademark Office, fax number (703) 872-9327, on August 6, 2003.


Laura Combs

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